



Solution Integration Guide for SCS / Business Communication Manager

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1.0 Introduction

This document does not describe procedures to configure the SCS or BCM for advanced functionality. For more information and procedures, please refer to the Nortel technical documentation found on the Nortel website.

1.1 Partner Questions

Section 3 of this guide provides screen shots and instructions for the configuration of your IP PBX. Should you require Support assistance regarding these instructions, please have the following information available:

- Company name
- Company location
- Administrator name and phone number
- IP PBX model and software version
- Customer Configuration Guide – Issue number and date

1.2 Trouble Reporting

Nortel will make every effort to quickly resolve reported troubles. The time required for trouble shooting can be reduced if the customer has the necessary detailed information available when reporting a problem.

1.3 Document Change History

Issue 01.00	November 30, 2009, issued version
Draft 00.01	October 30, 2009, original version

1.4 Document Feedback

2.0 Special Notes

None

3.0 Overview

3.1 Capabilities

The following are capabilities provided by this solution:

3.1.1 BCM as PSTN Gateway

Basic call to and from sets on SCS to and from PSTN via the BCM including:

- hold and retrieve on both ends;
- CLID and CPND display;
- call redirection including blind transfer, consultative transfer, call forward, and conference, with appropriate CLID/CPND;
- hold and retrieve of redirected calls;
- codec andptime negotiation;
- DTMF in both directions;
- hunt groups;
- ACD;
- call park.

3.1.2 BCM as Peer

Basic call to and from sets on SCS to and from sets on the BCM including:

- calls to hunt groups on each system;
- calls to SCS ACD;
- overflow calls to prime set of BCM;
- CLID and CPND display;
- calls to fax machines on each system;
- call forward (all calls, no response, busy);
- calls to BCM AA or CCR;
- calls to BCM Contact Center;
- BCM conference;
- BCM Meet-Me Conference;
- tandem calls through PSTN to another BCM or a PSTN user;
- call transfer on BCM;
- hold and retrieve on both ends;
- call park on BCM;
- call camp on BCM;
- codec/ptime negotiation;
- DTMF in both directions;
- Silent Monitor and Silent Record-A-Call on BCM;
- Find Me/Follow Me on BCM;

- calls to Voice Mail on BCM;
- SWCA on BCM;
- answer keys on BCM;
- Service Modes on BCM;
- external call forward (all calls, no response, busy) on BCM.

3.2 Limitations:

There are no known limitations of this solution.

3.3 Network Diagram

3.3.1 BCM as PSTN Gateway

Error! Reference source not found. shows an example configuration in which a BCM is used as PSTN gateway for a SCS deployment. The deployment scenario consists of a single site SCS deployment supporting local and remote SIP clients with the BCM acting as a PSTN gateway. In this configuration, inbound calls from the PSTN are tandemmed out via the SIP trunk between the BCM and SCS to SIP sets registered with SCS. In the reverse directions, calls originated by either local or remote SIP sets destined for the PSTN are routed via the SIP trunk to the BCM and then tandemmed out via the analog or digital trunk.

Error! Reference source not found. also shows a remote worker with a SIP set registered with the SCS. In the figure, it is assumed that the remote worker is located behind a SIP-unaware NAT router.

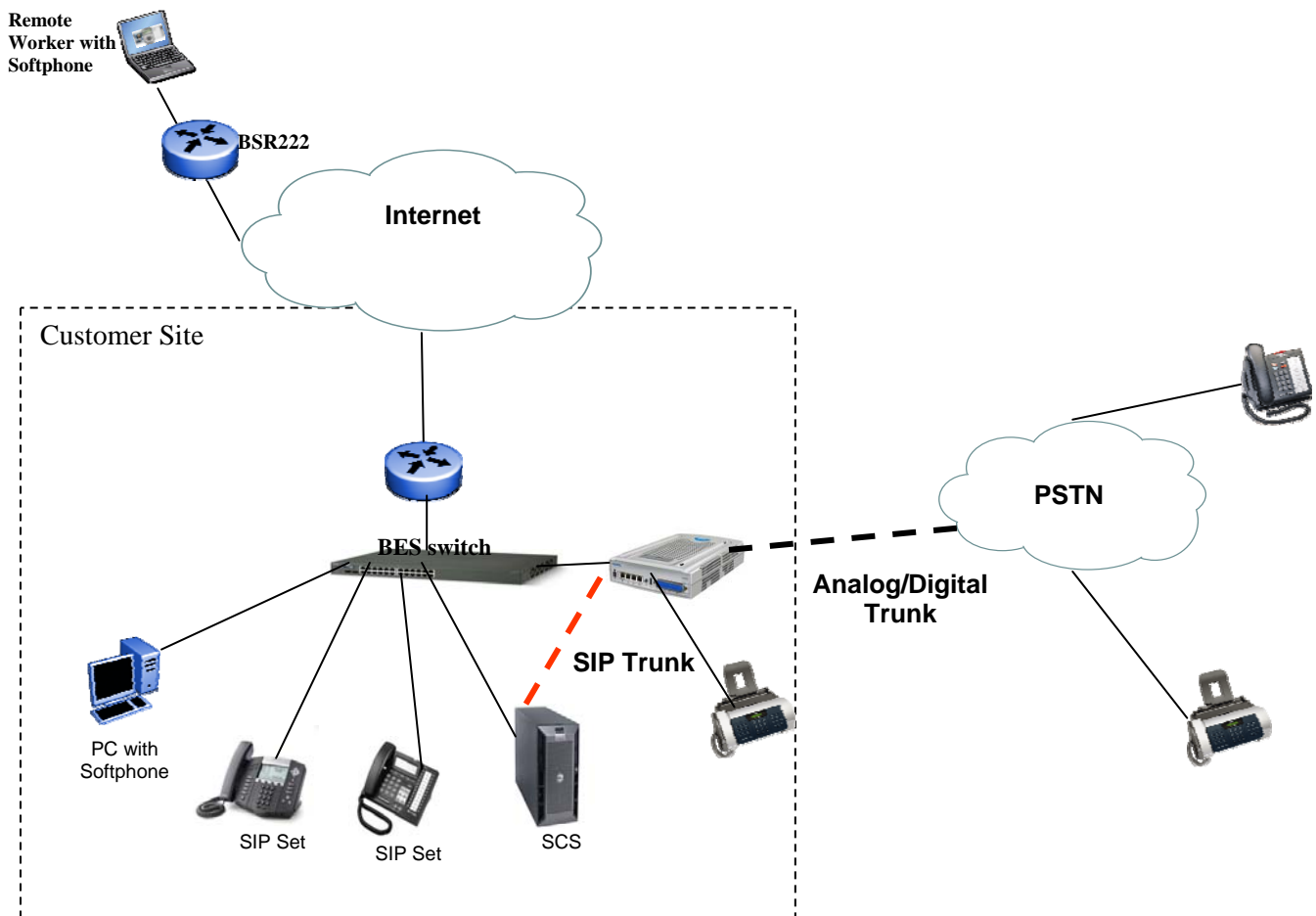


Figure 1 BCM as PSTN Gateway

3.3.2 BCM as Peer

Figure 2 shows an example configuration in which a BCM is used as a peer for a SCS deployment. In this figure, BCM is also used as PSTN gateway for a SCS deployment in addition to providing PSTN connectivity for its own sets.

The deployment scenario consists of a single site SCS deployment supporting local and remote SIP clients. The BCM supports sets as well. Calls between BCM sets and SCS sets are routed via the SIP trunk between the two call servers.

If in addition, the BCM is also acting as a PSTN gateway, inbound calls from the PSTN are tandemmed out via the SIP trunk between the BCM and SCS to SIP sets registered with SCS. In the reverse directions, calls originated by either local or remote SIP sets destined for the PSTN are routed via the SIP trunk to the BCM and then tandemmed out via the analog or digital trunk.

Figure 2 also shows a remote worker with a SIP set registered with the SCS. In the figure, it is assumed that the remote worker is located behind a SIP-unaware NAT router.

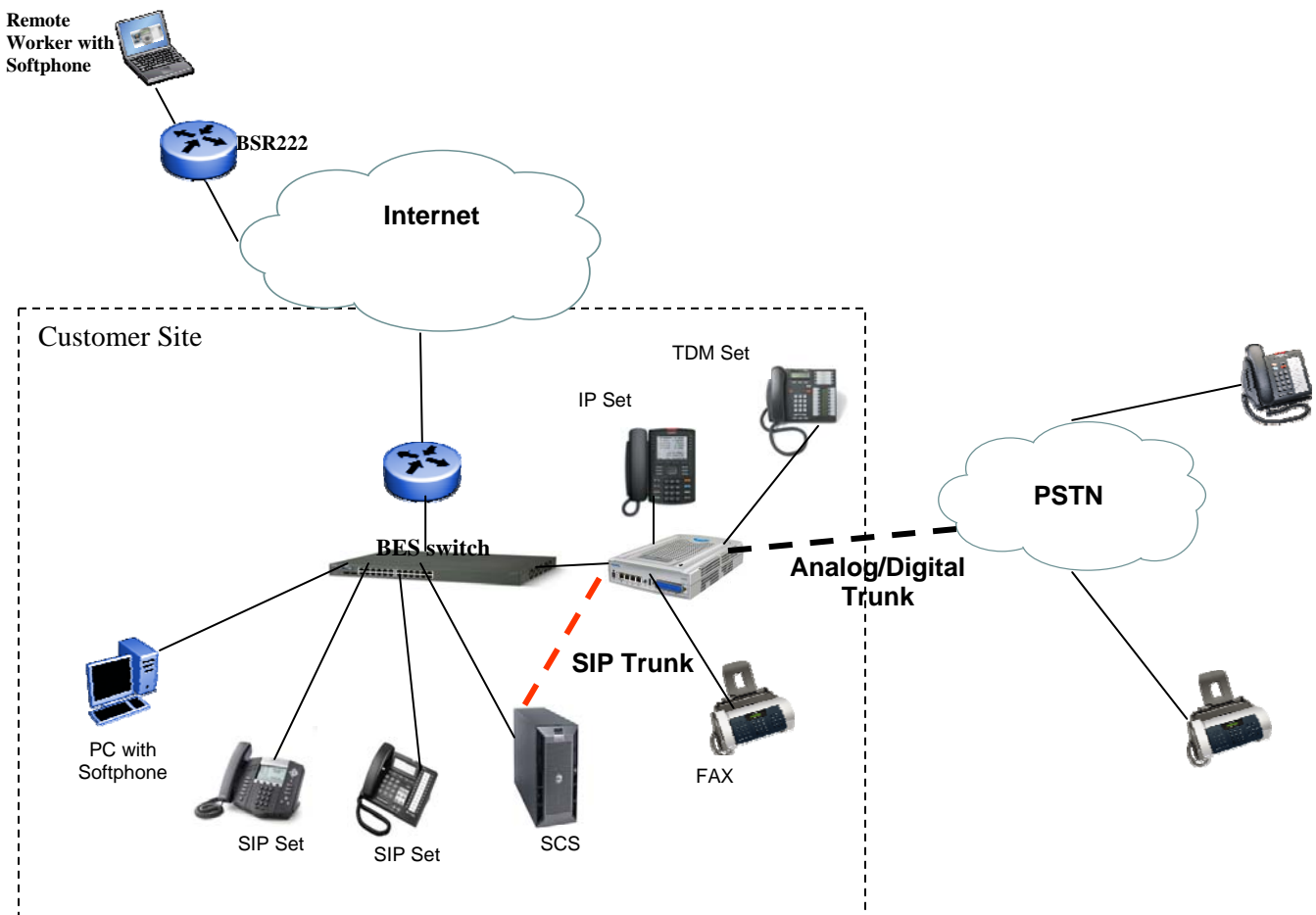


Figure 2 BCM as Peer

4.0 Configuration Guide

4.1 SCS Software Versions

SCS software versions should be at the following levels:

- SCS Release 3.0

4.2 BCM Software Versions

This Solution Configuration Guide is applicable to the following BCM Releases:

- BCM50 Rls 3.0 - The patch indicated below is required.
 - The patch BCM050.R300.CORE-TELEPHONY-DSP-208-1 is available at <http://support.nortel.com/go/main.jsp?cscat=SWDETAIL&id=973412&poid=15181>
- BCM450 Rls 1.0 – The smart update indicated below is required. The required functionality will also be contained in subsequent smart updates.
 - The system smart update BCM450.R100.SU.System_009_BCM450_R1 is available at <http://support.nortel.com/go/main.jsp?cscat=SWDETAIL&id=970487&poid=19781>
- BCM Rls 5.0 – The required functionality is available in the Major Release. Additional patches or smart updates are not required at this time. This applies to both the BCM50 and BCM450 hardware platforms.

4.3 BCM as PSTN Gateway

4.3.1 SCS Configuration

In order to use the Nortel SCS connected to a Nortel BCM do the following:

4.3.1.1 Gateway Configuration

To configure SCS SIP trunks to reach the BCM, first add the BCM as an unmanaged gateway. In the SCS Administration System, select “Gateways” from the Devices menu. From the “Add new gateway” dropdown menu, select “Unmanaged gateway”. Configure the gateway name and the IP address, and click OK.

Name	<input type="text" value="BCM"/>
Address	<input type="text" value="10.1.1.1"/> <small>For a PSTN gateway: IP address of the gateway (example: gateway.example.com). The gateway is the SIP trunking provider: External IP address or fully qualified domain name (example: sip.provider.com). Note: A SIP SBC needs to be deployed to interconnect two VoIP systems using SIP.</small>
Port	<input type="text" value="0"/> <small>Optional UDP or TCP port if a non-standard port is required.</small>
Transport protocol	<input type="text" value="Auto"/> <small>Set to UDP or TCP to force the SIP transport protocol. DNS query.</small>
Location	<input type="text" value="-- all --"/> <small>Restrict the gateway by selecting a specific location group of users and you need to create a user group (remember that users can be in more than one group) which location or by which user the call originates (for example, an office would like to have a gateway preference so that it can preserve WAN bandwidth or to use Caller ID offered by the gateway assigned to it. Only if that gateway is not available will the corresponding dialing rule be used).</small>
Shared	<input checked="" type="checkbox"/> <small>If checked this gateway can be used by any user in the system. If not checked, the gateway is only available to users in the location group.</small>
Description	<input type="text"/>

Figure 3 Gateway - Unmanaged Gateway Configuration on SCS

4.3.1.2 Dialing Plan

The BCM's dialing plan will be configured to allow the BCM to route calls to SCS users and also to the Park Server, Auto Attendant, Voice Mail, and other features on SCS. This will be much simpler if all of the user DNs and feature DNs on the SCS start with the same digit. In the following examples, on the SCS, all user DNs as well as DNs for the Operator, Hunt Groups, Paging DNs, and Call Park Extension all start with 6.

Now, provide a dialing plan using the unmanaged gateway to route calls to the PSTN via the BCM. Select "Dial Plans" from the System menu. From the "Add new rule" dropdown menu, select "Custom". On the Dial Rule page, check the Enabled checkbox and enter a name. Enter a dialing string prefix that will reach the BCM and the number of digits of that prefix to be sent to the BCM, and click the Add link. In this example, the digit 3 is the prefix. This prefix must be the same as the BCM destination code which routes calls to the PSTN (see section 4.3.2.3.1).

DIAL RULE

Enabled ☒

Name

Description

Dialed Number

Prefix and [Add](#)

Figure 4 SCS Dial Plan Configuration Part 1

At the bottom of the page, enter the digit string to be dialed out. Then, from the “More actions” dropdown menu, select the gateway created in the previous step. Restart services if necessary.

In this example, the entire dialed string, including the prefix, will be dialed to the BCM.

Resulting Call

Dial and append

Schedule

Gateways

<input type="checkbox"/>	Name	Address	Model	Description
<input type="checkbox"/>	BCM	10.1.1.1		Unmanaged gateway

Figure 5 SCS Dial Plan Configuration Part 2

4.3.1.3 Auto Attendant

If you plan to configure analog trunks on the BCM as described in section 4.3.2.6, then the SCS Auto Attendant must be configured. Either the DN of the Auto Attendant must start with the same digit as the other SCS DNs (in these examples, 6) and be the same length, or else the BCM must be configured with an additional destination code and Public Network DN Length in order to route calls from the PSTN correctly (see section 4.3.2.2).

4.3.1.4 Dialing Calls to the PSTN

In these examples, the SCS user must dial 3 followed by the PSTN number that he wishes to reach.

4.3.2 BCM Configuration

4.3.2.1 Keycodes

In order to use the BCM's IP and PSTN trunks, it will be necessary to purchase and apply keycodes to enable them.

4.3.2.2 Remote Gateway Configuration

A remote IP gateway must be configured to reach the SCS. Navigate to Resources -> Telephony Resources -> and click on Internal IP Trunks. In the dialog box:

- provide a description for the gateway;
- configure the leading destination digits to route calls through the gateway (this will correspond to the destination code to reach the SCS system configured in section 4.3.2.3.1);
- set the VoIP protocol to SIP;
- provide the IP address or Fully Qualified Domain Name (FQDN) of the SCS. If FQDN is provided, ensure that this is resolvable;
- set the GW Type to Other;
- leave the other fields with their default values.

Figure 6 below provides an example configuration.

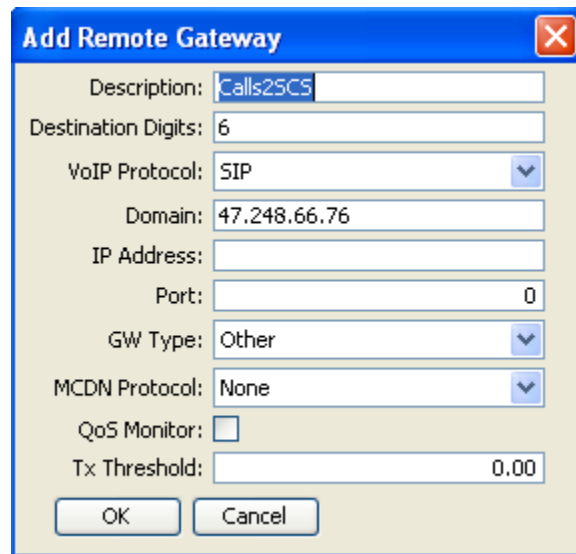


Figure 6 Remote Gateway Configuration in BCM Element Manager

4.3.2.3 Dialing Plan

Destination codes must be configured on the BCM. A destination code is the leading digit(s) of the digit string received either from the SCS or the PSTN. The BCM places certain restrictions on destination codes. A destination code may not conflict with set or hunt group DNs, the direct dial digit, the park retrieve prefix, line pool codes, public or private target line DNs, the public or private auto DN, or the public or private DISA DN.

When the BCM acts only as a PSTN gateway, most of these elements of the numbering plan are not needed. Deconfiguring conflicting but unnecessary elements of the numbering plan may simplify the configuration of the destination codes.

In the BCM Element Manager, navigate to Telephony -> Dialing Plan -> General. For "Park prefix" and "Direct Dial digit", select "None" from the drop down menu.

Navigate to Telephony -> Dialing Plan -> Line Pools. Clear any line pool access codes.

Navigate to Telephony -> Lines -> Target Lines. Clear any numbers under the “Pub. Received #” and “Priv. Received #” columns.

Navigate to Telephony -> Dialing Plan -> Public Network. Clear the “Public Auto DN” and “Public DISA DN”.

Navigate to Telephony -> Dialing Plan -> Private Network. Clear the “Private Auto DN” and “Private DISA DN”.

4.3.2.3.1 Route and Destination Code Configuration

On the BCM, a route must be added for routing calls from the SCS to the PSTN and another route for routing calls from the PSTN to the SCS. This can be configured in the BCM Element Manager by navigating to Telephony -> Dialing Plan -> Routing and selecting the Routes tab. In the example below, route 002 is configured to route calls to the PSTN using Pool A, and route 003 is configured to route calls to the SCS using BlocA. The DN Type of both routes should be set to Public.

Dialing Plan - Routing					
Routes Destination Codes Second Dial Tone					
Routes					
Route	External Number	Use Pool	DN Type	Service Type	Service ID
000		A	N/A	N/A	N/A
001		BlocA	Private	N/A	N/A
002		A	Public (Unknown)	N/A	N/A
003		BlocA	Public (Unknown)	N/A	N/A

Figure 7 Dialing Plan - Route Configuration in BCM Element Manager

Then destination codes must be added. Select the Destination Codes tab. Configure a destination code consisting of one or more digits and associate it with the route routing to the PSTN. Configure another destination code and associate it with the route routing to the SCS. In this example, the destination code 3 routes calls to the PSTN, and the leading 3 will not be dialed out on the PSTN (all destination code digits will be absorbed). The destination code 6 routes calls to the SCS, and the leading 6 will be dialed to the SCS (0 destination code digits will be absorbed).

Dialing Plan - Routing					
Routes Destination Codes Second Dial Tone					
Destination Codes					
Destination Code	Normal Route	Absorbed Length	Wild Card: 0	1	
3	002	All	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4101	003	1	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	001	All	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	003	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	000	All	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Figure 8 Dialing Plan - Destination Code Configuration in BCM Element Manager

Finally, the Public Network DN Length must be configured. This tells the BCM how many digits to expect when a call arrives on an inbound PSTN trunk. Navigate to Telephony -> Dialing Plan -> Public Network. Under the panel labeled “Public Network DN Lengths”, click the Add button to add a new DN Prefix and click OK. Then double-click on the default DN Length and change it to the appropriate value. In this example, the prefix 6 is added, with a length of 4 (the DN length on the SCS system).

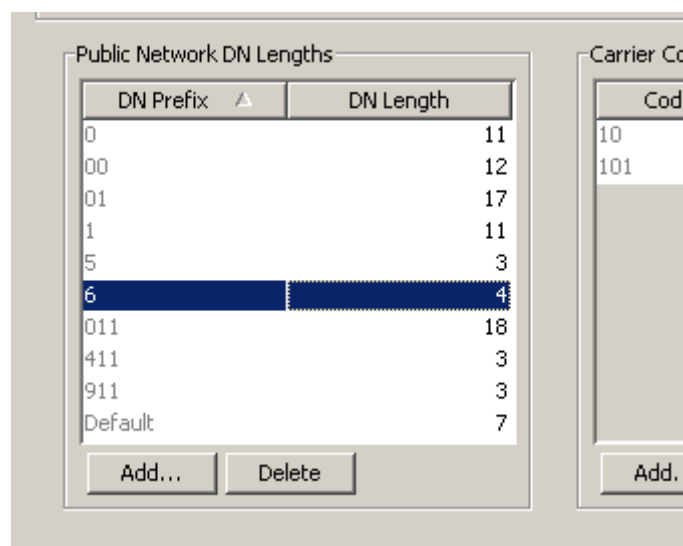


Figure 9 Dialing Plan - Public Network DN Length Configuration in BCM Element Manager

4.3.2.4 Remote Access Package Configuration

A Remote Access Package must be configured to allow calls to be routed from one trunk to another. This can be configured in the BCM Element Manager by navigating to Telephony -> Routing -> Call Security. In this example, Line Pool A (for calls to the PSTN) and BlocA (for calls to the SCS) are assigned to Remote Access Package 01 as shown below.

Remote Access Packages

Package	Remote Page
00	<input type="checkbox"/>
01	<input checked="" type="checkbox"/>
02	<input type="checkbox"/>
03	<input type="checkbox"/>
04	<input type="checkbox"/>
05	<input type="checkbox"/>
06	<input type="checkbox"/>
07	<input type="checkbox"/>
08	<input type="checkbox"/>
09	<input type="checkbox"/>
10	<input type="checkbox"/>
11	<input type="checkbox"/>
12	<input type="checkbox"/>
13	<input type="checkbox"/>
14	<input type="checkbox"/>
15	<input type="checkbox"/>

Details for Package: 01

Line Pool Access

Line Pool

A

BlocA

Add Delete

Figure 10 Remote Access Package Configuration in BCM Element Manager

Next, assign the Remote Access Package to the IP and PSTN trunks. This can be configured in the BCM Element Manager by navigating to Telephony -> Lines -> Active VoIP Lines. Select the first VoIP trunk. Then, click on the Restrictions tab. Enter the package number in the field labelled "Use remote package".

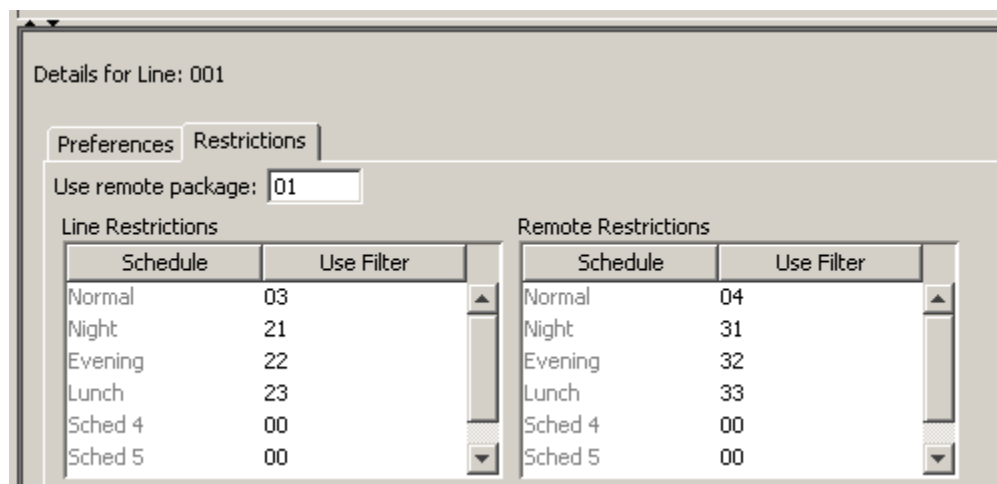


Figure 11 Remote Access Package Assignment in BCM Element Manager

For the PSTN trunks, navigate to Telephony -> Lines -> Active Physical Lines. Select the first inbound PSTN trunk, select the Restrictions tab, and assign the remote package as above. Repeat for each inbound PSTN trunk.

4.3.2.5 Configuring Answer Mode on PSTN Trunks

Each inbound PSTN trunk must be configured as auto answer. In the BCM Element Manager, navigate to Telephony -> Lines -> Active Physical Lines. Select the first inbound PSTN trunk, and select the Preferences tab. Select Auto from the dropdown menu next to the field labelled "Answer mode".

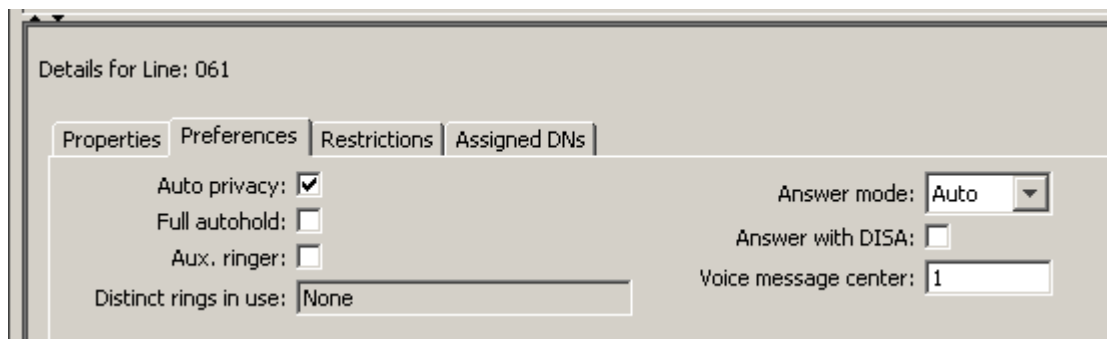


Figure 12 Answer Mode Configuration in BCM Element Manager

Repeat for each inbound PSTN trunk.

4.3.2.6 Dialing Calls from the PSTN

If the inbound PSTN trunks are digital (for example, PRI), typically the caller can dial a single digit string which includes the target SCS DN. The trunk will deliver the SCS DN as part of a Dialed Number Identification Service, or DNIS, number, which the BCM can use to route the call to the SCS.

Analog trunks typically do not provide DNIS. In this case, a caller from the PSTN will be presented with a second dial tone. From here, the caller can then dial the target SCS DN.

A workaround to allow calls from the PSTN to be routed to the SCS without presenting a second dial tone is to set the answer mode for the analog trunk to Manual and redirect the incoming calls from PSTN to the SCS Auto Attendant. From the Auto Attendant, the PSTN user can dial the DN of the target SCS set.

This can be configured in the BCM Element Manager by navigating to Telephony -> Lines -> Active Physical Lines and selecting the analog trunk of interest. Then, click on the Preferences tab. Set the Answer Mode to Manual, and provide the DN of the Auto Attendant on SCS in the "Redirect to" text box. **Note, however, that with this configuration, CLID will not be delivered on calls from this trunk to the SCS.**

The figure below illustrates how this is configured on the BCM. In this example, the DN of the SCS Auto Attendant is 6200.

Active Physical Lines

Line	Trunk Type	Name	Control Set	Line Type	Prime Set	Pub. I
009	Loop	Line009	2221	Pool:B	2221	N/A
010	Loop	Line010	2221	Pool:B	2221	N/A
011	Loop	Line011	2221	Public	2221	N/A
012	Loop	Line012	2221	Public	2221	N/A
036	Loop	Line036	2221	Pool:A	2221	N/A
037	Loop	Line037	2221	Pool:A	2221	N/A
038	Loop	Line038	2221	Public	2221	N/A
039	Loop	Line039	2221	Public	2221	N/A
040	Loop	Line040	2221	Public	2221	N/A
041	Loop	Line041	2221	Public	2221	N/A
042	Loop	Line042	2221	Public	2221	N/A
043	Loop	Line043	2221	Public	2221	N/A

Copy Paste... Renumber

Details for Line: 036

Properties Preferences Restrictions Assigned DN's

Auto privacy: ☒ Answer mode: Manual

Full autohold: ☐ Voice message center: 1

Aux. ringer: ☐ Redirect to: 6200

Distinct rings in use: None

Figure 13 Alternate Analog Trunk Configuration in BCM Element Manager

4.4 BCM as Peer

In order to use the SCS and BCM systems as peers, it will be necessary to coordinate their dialing plans. To coordinate the two dialing plans, you must decide how many set DN's you will need on each system and what they will be. For example, you may choose 80 set DN's on the BCM system, starting with DN 221. This means that some of the DN's will start with the digit 2 and some with the digit 3, which then restricts the available space for destination codes on the BCM system.

You must also decide which features of each system you wish to use, since many of the features have dialing plan implications; for example, using the Park feature on the BCM suggest that you will need to configure the Park Retrieve prefix, which then limits the space in the numbering plan available for other elements.

4.4.1 SCS Configuration

4.4.1.1 General Configuration

Configure the set and feature DN's so as not to conflict with target line DN's (and the PSTN destination code, if used) on the BCM.

The BCM's dialing plan will be configured to allow the BCM to route calls to SCS users and also to the Park Server, Auto Attendant, Voice Mail, and other features on SCS. This will be much simpler if all of the user DN's and feature DN's on the SCS start with the same digit.

4.4.1.2 Gateway Configuration

See section 4.3.1.1.

4.4.1.3 Dialing Plan

In the following examples, on the SCS, all user DNs as well as DNs for the Operator, Hunt Groups, Paging DNs, and Call Park Extension all start with 6.

Now, provide a dialing plan using the unmanaged gateway to route calls to the BCM. Select “Dial Plans” from the System menu. From the “Add new rule” dropdown menu, select “Custom”. On the Dial Rule page, check the Enabled checkbox and enter a name. Enter a dialing string prefix that will reach the BCM and the number of digits of that prefix to be sent to the BCM, and click the Add link. In this example, the digit 2 is the prefix. This prefix must be the same as the first digit of the target line DNs on the BCM (see section 4.4.2.4). If some target line DNs start with a different digit, then add another rule for that digit.

DIAL RULE

Enabled ☒

Name

Description

Dialed Number

Prefix and [Add](#)

Required Permissions

Figure 14 SCS Dial Plan Configuration Part 1

At the bottom of the page, enter the digit string to be dialed out. Then, from the “More actions” dropdown menu, select the gateway created in the previous step. Restart services if necessary.

In this example, the entire dialed string, including the prefix, will be dialed to the BCM.

Resulting Call

Dial and append

Schedule

Gateways

<input type="checkbox"/>	Name	Address	Model	Description
<input type="checkbox"/>	BCM	10.1.1.1		Unmanaged gateway
<input type="button" value="Move Up"/> <input type="button" value="Move Down"/> <input type="button" value="Remove"/>				
<input type="button" value="OK"/> <input type="button" value="Apply"/> <input type="button" value="Cancel"/>				

Figure 15 SCS Dial Plan Configuration Part 2

4.4.1.3.1 Alternate Dialing Plan Configuration

If the constraints on your dialing plan are such that you cannot add the needed dialing prefix(es) for the target line DN and cannot change the target line DN to match the prefix(es) that you can add, then you can add a prefix such as the following.

DIAL RULE

Enabled ☒

Name

Description

Dialed Number

Prefix and [Delete](#)

Prefix and [Add](#) [Delete](#)

Figure 16 Alternate SCS Dial Plan Configuration Part 1

Resulting Call

Dial and append

Figure 17 SCS Dial Plan Configuration Part 2

In this case, the SCS user would dial 9 followed by the target line DN to reach the BCM user. The prefix 9 would not be sent to the BCM.

4.4.2 BCM Configuration

4.4.2.1 Keycodes

In order to use the BCM's IP trunks, PSTN trunks, and other features, it will be necessary to purchase and apply the keycodes to enable them.

4.4.2.2 Dialing Plan Elements

The table below shows which BCM dialing plan elements are restricted from conflicting with others. An X in the cell indicates that the element in the left column cannot conflict with the element in the top row.

	Set/HG DNs	Park Retrieve Code	Direct Dial Digit	External Code	Line Pool Codes	Destination Codes	Target Line DNs (public)	Auto/DISA DNs (public)	Target Line DN (private)	Auto/DISA DNs (private)
Set/HG DN	X	X	X	X	X	X				
Park Retrieve	X		X	X	X	X				

	Set/HG DNs	Park Retrieve Code	Direct Dial Digit	External Code	Line Pool Codes	Destination Codes	Target Line DNs (public)	Auto/DISA DNs (public)	Target Line DNs (private)	Auto/DISA DNs (private)
Code										
Direct Dial Digit	X	X		X	X	X				
External Code	X	X	X			X				
Line Pool Codes	X	X	X		X	X	X	X	X	X
Destination Codes	X	X	X		X	X	X	X	X	X
Target Line DNs (public)					X	X	X	X		
Auto/DISA DNs (public)					X	X	X	X		
Target Line DNs (private)					X	X			X	X
Auto/DISA DNs (private)					X	X			X	X

Table 1 - BCM Dialing Plan Elements

4.4.2.3 Dialing Plan – Dialing SCS DN from BCM Sets

This is accomplished by configuring routes and destination codes on the BCM system.

4.4.2.3.1 Remote Gateway Configuration

Please see section 4.3.2.2.

4.4.2.3.2 Route and Destination Code Configuration

On the BCM, a route must be added for routing calls from the BCM to the SCS. This can be configured in the BCM Element Manager by navigating to Telephony -> Dialing Plan -> Routing and selecting the Routes tab. In the example below, route 003 is configured to route calls to the SCS using BlocA. The DN Type of both routes should be set to Public.

Dialing Plan - Routing					
Routes					
Route	External Number	Use Pool	DN Type	Service Type	Service ID
000		A	N/A	N/A	N/A
001		BlocA	Private	N/A	N/A
002		A	Public (Unknown)	N/A	N/A
003		BlocA	Public (Unknown)	N/A	N/A

Figure 18 Dialing Plan - Route Configuration in BCM Element Manager

Then a destination code must be added. Select the Destination Codes tab. Configure a destination code, and associate it with the route routing to the SCS. In this example, the destination code 6 routes calls to the SCS, and the leading 6 will be dialed to the SCS (0 destination code digits will be absorbed).

Dialing Plan - Routing

Routes

Destination Codes

Second Dial Tone

Destination Codes

Destination Code	Normal Route	Absorbed Length	Wild Card: 0	1
3	002	All	<input type="checkbox"/>	<input type="checkbox"/>
4101	003	1	<input type="checkbox"/>	<input type="checkbox"/>
5	001	All	<input type="checkbox"/>	<input type="checkbox"/>
6	003	0	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
9	000	All	<input type="checkbox"/>	<input type="checkbox"/>

Figure 19 Dialing Plan - Destination Code Configuration in BCM Element Manager

Finally, the Public Network DN Length must be configured. This tells the BCM how many digits to expect when a BCM user dials a call to an SCS DN. Navigate to Telephony -> Dialing Plan -> Public Network. Under the panel labeled "Public Network DN Lengths", click the Add button to add a new DN Prefix and click OK. Then double-click on the default DN Length and change it to the appropriate value. In this example, the prefix 6 is added, with a length of 4 (the DN length on the SCS system).

Public Network DN Lengths		Carrier Co
DN Prefix	DN Length	Cod
0	11	10
00	12	101
01	17	
1	11	
5	3	
6	4	
011	18	
411	3	
911	3	
Default	7	
Add... Delete		Add...

Figure 20 Dialing Plan - Public Network DN Length Configuration in BCM Element Manager

4.4.2.3.3 Alternate Destination Code Configuration

If the constraints on your dialing plan are such that you cannot add the needed destination code(s) for the SCS DN and cannot change the SCS DN to match the destination code(s) that you can add, then you can add a prefix such as the following.

Destination Code	Normal Route	Absorbed Length	Wild Card: 0	1
5	001	0	<input type="checkbox"/>	<input type="checkbox"/>
7	000	All	<input type="checkbox"/>	<input type="checkbox"/>
9	001	All	<input type="checkbox"/>	<input type="checkbox"/>

Figure 21 Alternate Destination Code Configuration in BCM Element Manager

In this case, the BCM user would dial 9 followed by the SCS DN to reach the SCS user. The prefix 9 would not be sent to the SCS (all destination code digits will be absorbed).

4.4.2.4 Dialing Plan – Dialing BCM DNs from SCS Sets

This is accomplished through the use of target lines on the BCM system. The target line DNs are the numbers that SCS users will dial to reach BCM sets. First, the length of the target line DNs must be configured. In the BCM Element Manager, navigate to Telephony -> Dialing Plan -> Public Network. In the panel labelled “Public Network Settings”, select the desired length from the dropdown menu labelled “Public Received number length”.

Figure 22 Selecting Target Line DN Length in BCM Element Manager

Now the target line DNs themselves can be configured. In the BCM Element Manager, navigate to Telephony -> Lines -> Target Lines. Select the first target line, and click the “Assigned DNs” tab. Assign the first BCM set to this target line. Under the “Pub. Received #” column, assign a target line DN. The target line DN can be the same as the DN of the BCM set to which it is assigned, but that is not required. Configure each BCM set with an individual target line and target line DN.

Target Lines

Line	Trunk Type	Name	Control Set	Line Type	Prime Set	Pub. Received #
125	Target line	Line125	221	Public	221	221
126	Target line	Line126	221	Public	221	222
127	Target line	Line127	221	Public	221	229
128	Target line	Line128	221	Public	221	
129	Target line	Line129	221	Public	221	
130	Target line	Line130	221	Public	221	
131	Target line	Line131	221	Public	221	
132	Target line	Line132	221	Public	221	
133	Target line	Line133	221	Public	221	
134	Target line	Line134	221	Public	221	
135	Target line	Line135	221	Public	221	
136	Target line	Line136	221	Public	221	
137	Target line	Line137	221	Public	221	
138	Target line	Line138	221	Public	221	
139	Target line	Line139	221	Public	221	
140	Target line	Line140	221	Public	221	
141	Target line	Line141	221	Public	221	

Copy Paste Renumber

Details for Line: 125

Preferences Assigned DNS

...	Appearance Type	Appearances	Caller ID Set	Vmsg Set
221	Appr&Ring	1	<input type="checkbox"/>	<input type="checkbox"/>

Add... Delete

Figure 23 Configuring Target Lines in BCM Element Manager

References

The following are useful references to assist in this solution:

SCS 3.0 Task Based Guides:

http://www.nortelscs.com/scs/sites/default/files/scsr3_docs/home.html

SCS 3.0 Online Help (available in the SCS Web UI directly). Can be viewed here also:

<http://www.nortelscs.com/scs/sites/default/files/scs3help/start.htm>

BCM 450 Release 1.0 Task Based Guides:

<http://support.nortel.com/go/main.jsp?cscat=DOCDETAIL&id=955922&poid=19781>

BCM 450 Release 5.0 Task Based Guides:

<http://support.nortel.com/go/main.jsp?cscat=DOCDETAIL&id=972992&poid=19781>

BCM50 Release 3.0 Task Based Guides:

<http://support.nortel.com/go/main.jsp?cscat=DOCDETAIL&id=955750&poid=15181>

BCM50 Release 5.0 Task Based Guides:

<http://support.nortel.com/go/main.jsp?cscat=DOCDETAIL&id=973713&poid=15181>